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INFORMATION DISCLOSURE STATEMENT

ATTY. DOCKET NO. 1744.0140006 APPLICATION NO. 10/086,250

APPLICANTS Sorrells et al.

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Page 6 of 58 ATTY. DOCKET NO. APPLICATION NO. 10/086,250 1744.0140006 DEC 1 7 2003 FORM PTO-1449 APPLICANTS Sorrells et al. ATION DISCLOSURE STATEMENT GROUP FILING DATE 2686 March 4, 2002 U.S. PATENT DOCUMENTS **EXAMINER** FILING DATE CLASS SUB-DOCUMENT DATE NAME INITIAL **CLASS** NUMBER M AA6 4,013,966 03/1977 Campbell Swerdlow AB6 4,019,140 04/1977 Lohrmann 07/1977 AC6 4,035,732 4,047,121 09/1977 Campbell AD6 01/1978 Young 4,066,841 AE6 Technology Center 2600 Huntington AF6 4,066,919 01/1978 Batz AG6 4,081,748 03/1978 4,130,765 12/1978 Arakelian et al. AH6 VB Van Gerwen et al. 4,130,806 12/1978 Al6 **FOREIGN PATENT DOCUMENTS EXAMINER** SUB-TRANSLATION **CLASS** COUNTRY INITIAL **DOCUMENT NUMBER** DATE CLASS No FP EP 0 785 635 A1 07/1997 AJ6 540 N/A FP EP 0 795 978 A2 09/1997 AK6 N/A EP AL6 EP 0 837 565 A1 04/1998 N/A EP AM6 EP 0 862 274 A1 09/1998 SA OTHER (Including Author, Title, Date, Pertinent Pages, etc.) Catalan, C. and Vilar, E., "Approach for satellite slant path remote sensing," Electronics Letters, IEE, Vol. 34, ΑN <u>6</u> No. 12, pp. 1238-1240 (June 11, 1998). Chan, P. et al., "A Highly Linear 1-GHz CMOS Downconversion Mixer," European Solid State Circuits AO 6 Conference, IEEE Communication Society, pp. 210-213 (September 22-24, 1993). Copy of Declaration of Michael J. Bultman filed in patent application Ser. No. 09/176,022, which is directed to AP <u>6</u> related subject matter, 2 pages. Copy of Declaration of Robert W. Cook filed in patent application Ser. No. 09/176,022, which is directed to AQ 6 related subject matter, 2 pages. Copy of Declaration of Alex Holtz filed in patent application Ser. No. 09/176,022, which is directed to related 6 AR subject matter, 3 pages.

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Page 8 of 58 ATTY. DOCKET NO. APPLICATION NO. 1744 . 0140006 10/086,250 FORM PTO-1449 APPLICANTS Sorrells et al. TION DISCLOSURE STATEMENT FILING DATE GROUP March 4, 2002 2686 **U.S. PATENT DOCUMENTS EXAMINER** FILING DATE DATE **CLASS** SUB-INITIAL DOCUMENT NAME CLASS NUMBER AA8 4,320,536 03/1982 Dietrich 08/1982 Gordy AB8 4,346,477 10/1982 Ikoma et al. AC8 4,355,401 4,356,558 10/1982 Owen et al. AD8 OEC 1 8 2003 11/1982 Gonda AE8 4,360,867 Collin 12/1982 AF8 4,363,132 Technology Center 2600 12/1982 Berger et al. AG8 4,365,217 01/1983 Cosand et al. AH8 4,370,572 4,389,579 06/1983 Stein AI8 FOREIGN PATENT DOCUMENTS **EXAMINER** SUB-TRANSLATION INITIAL DOCUMENT NUMBER DATE COUNTRY **CLASS** CLASS No 02/1990 JP AJ8 JP 2-39632 A WH No JP 2-131629 A 05/1990 JΡ AK8 No JP 2-276351 A 11/1990 JP AL8 N/A 8MA WO 80/01633⁻A1 08/1980 PCT OTHER (Including Author, Title, Date, Pertinent Pages, etc.) DIALOG File 347 (JAPIO) English Language Patent Abstract for JP 2-131629, 1 page (May 21, 1990 - Date of ΑN 8 publication of application). DIALOG File 347 (JAPIO) English Language Patent Abstract for JP 2-39632, 1 page (February 8, 1990 - Date of AO 8 publication of application). DIALOG File 348 (European Patents) English Language Patent Abstract for EP 0 785 635 A1, 3 pages ΑP <u>8</u> (December 26, 1996 - Date of publication of application). DIALOG File 348 (European Patents) English Language Patent Abstract for EP 35166 A1, 2 pages (February AQ 8 18, 1981 - Date of publication of application). "DSO takes sampling rate to 1 Ghz," Electronic Engineering, Morgan Grampian Publishers, Vol. 59, No. 723, pp. AR 8 77 and 79 (March 1987). DATE CONSIDERED **EXAMINER**

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740	AA12	4,65	51,034	03/19	987	Sato					
	AB12	4,67	75,882	06/19	987	Lillie	et al.				
	AC12	4,68	38,253	08/19	987	Gum	m		HE	CEIV	ピレ
	AD12	4,71	16,376	12/19	987	Dau	telin			C 1 0 20	h2
	AE12	4,71	16,388	12/19	987	Jaco	bs		טכ	C 1 8 20	03
	AF12	4,71	18,113	01/19	988	Roth	er et al.		Tochno	logy Cent	or 2600
	AG12	4,72	26,041	02/19	988	Proh	aska <i>et al.</i>		TECHNO	1097 0011	DF-2000-3
	AH12	4,73	33,403 03/1		988	Simo	ne				
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	AK12	wo	98/40968 A2&	А3	09/1998		PCT				N/A
	AL12	EP (0 529 836 A1		03/1993		EP				N/A
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	AO	<u>12</u>					ase Scintillation Measu 7, pp. 287-289 (April 1,		8-2 km Lir	ne-Of-Sight F	ath at 30 Ghz,*
Hewitt, A. et al., "An 18 Ghz Wideband LOS Multipath Experiment," International Conference on Med for Telecommunication Transmission Systems - MTTS 85, IEE, pp. 112-116 (November 27-28, 1985) Hewitt, A. et al., "An Autoregressive Approach to the Identification of Multipath Ray Parameters from Measurements," IEEE Transactions on Communications, IEEE Communications Society, Vol. 37, No. 1136-1143 (November 1989).										n Measurements 1985)	
										/ Parameters lociety, Vol. 3	from Field 37, No. 11, pp.
Sty	AR	<u>12</u>	Hewitt, A. and Measuremen 7, pp. 789-79	t Tech	niques," IEE	ve fad E Tra	ing on LOS Microwave	Links: Class cations, IEE	sical and S E Commu	Spread-Spec Inications So	trum ciety, Vol. 36, No.
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513	AA17	4,955		09/19	90	Conn	erney et al.						
7	AB17	4,965		10/19		Bilter	jst						
	AC17	4,967		10/19	90	Quiev	y et al.		HE	CEIV	ED		
	AD17	4,970	0,703	11/19	90	Harih	aran et al			0.4.0.00	03		
	AE17	4,982	2,353	01/19	91	Jacol	et al.		Dt	C 1 8 20	0.3		
	AF17	4,984	4,077	01/19	91	Uchic	la		Tochro	Joan Con	or 2600		
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	AK17	JP 5	-175734 A		07/1993		JP				No		
	AL17	JP 7	'-154344 A		06/1995		JP				No		
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245	AN	<u>17</u>	Liou, M.L., "/ IEEE, Vol. 7	A Tutor 1, No.	rial on Comp 8, pp. 987-10	outer-A 005 (A	ided Analysis of Switche ugust 1983).	ed-Capacit	or Circuits	s," Proceedin	gs of the IEEE,		
	AO	<u>17</u>	Lo, P. <i>et al.</i> , (March 26, 1	"Cohe 980).	rent Automa	itic Gai	n Control," IEE Colloqui	ium on Pha	ase Locke	d Techniques	s, IEE, pp. 2/1-2/6		
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Page 20 of 58 ATTY. DOCKET NO. APPLICATION NO. 10/086,250 1744.0140006 FORM PTO-1449 APPLICANTS Sorrells et al MATION DISCLOSURE STATEMENT GROUP FILING DATE & TRADE! 2686 March 4, 2002 **U.S. PATENT DOCUMENTS EXAMINER** CLASS INITIAL **DOCUMENT** DATE NAME SUB-**FILING DATE** NUMBER **CLASS** ちじり **AA20** 08/1992 Cabot 5,136,267 Kosuga **AB20** 5,140,705 08/1992 09/1992 Moore et al. AC20 5,150,124 09/1992 Caldwell et al. AD20 5,151,661 AE20 5,159,710 10/1992 Cusdin Technology Center 2600 AF20 12/1992 Silvian 5,170,414 12/1992 Hiraiwa et al. AG20 5,172,070 AH20 5,191,459 03/1993 Thompson et al. Ma 04/1993 Ashgar et al. A120 5,204,642 **FOREIGN PATENT DOCUMENTS EXAMINER** INITIAL **DOCUMENT NUMBER** DATE COUNTRY CLASS **TRANSLATION** SUB-CLASS AJ20 JP 60-130203 A 07/1985 JP Yes (Doc. AO56) AK20 DE 196 27 640 A1 01/1997 DE No AL₂₀ EP 0 087 336 A1 08/1983 EP No AM20 EP 0 087 336 B1 07/1986 FP W No OTHER (Including Author, Title, Date, Pertinent Pages, etc.) Ndzi, D. et al., "Wideband Statistics of Signal Levels and Doppler Spread on an Over-The-Sea Transhorizon SU Link," IEE Colloquium on Propagation Characteristics and Related System Techniques for Beyond Line-of-Sight AN 20 Radio, IEE, pp. 9/1-9/6 (November 24, 1997). "New zero IF chipset from Philips," Electronic Engineering, United News & Media, Vol. 67, No. 825, p. 10 AO <u>20</u> (September 1995). Ohara, H. et al., "First monolithic PCM filter cuts cost of telecomm systems," Electronic Design, Hayden AP <u>20</u> Publishing Company, Vol. 27, No. 8, pp. 130-135 (April 12, 1979). AQ 20 Oppenheim, A.V. et al., Signals and Systems, Prentice-Hall, pp. 527-531 and 561-562 (1983).

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Page 22 of 58 ATTY. DOCKET NO. APPLICATION NO. 10/086,250 1744.0140006 1 7 2003 DEC FORM PTO-1449 **APPLICANTS** Sorrells et al TION DISCLOSURE STATEMENT FILING DATE GROUP 2686 March 4, 2002 **U.S. PATENT DOCUMENTS** EXAMINER **FILING DATE** INITIAL **DOCUMENT** DATE NAME CLASS SUB-**CLASS** NUMBER Stone et al. **AA22** 5,251,218 10/1993 AB22 Nonami 5,251,232 10/1993 AC22 5,260,970 11/1993 Henry et al. AD22 5,263,194 11/1993 Ragan AE22 5,263,196 11/1993 Jasper Kawasaki 11/1993 AF22 5,267,023 Technology Center 2600 5,278,826 01/1994 Murphy et al. AG22 AH22 5,282,023 01/1994 Scarpa 02/1994 Schaub Al22 5,287,516 **FOREIGN PATENT DOCUMENTS EXAMINER** COUNTRY **TRANSLATION** INITIAL **DOCUMENT NUMBER** DATE CLASS SUB-JΡ No AJ22 JP 5-327356 A 12/1993 EР N/A AK22 EP 0 643 477 A2&A3 03/1995 N/A EΡ AL22 EP 0 877 476 A1 11/1998 N/A AM22 EP 0 977 351 A1 02/2000 EP *בא*ן OTHER (Including Author, Title, Date, Pertinent Pages, etc.) Press Release, "Parkervision, Inc. Announces the Appointment of Michael Baker to the New Position of National AN <u>22</u> Sales Manager," Lippert/Heilshorn and Associates, 1 Page (April 7, 1994). Press Release, "Parkervision's Cameraman Well-Received By Distance Learning Market," Lippert/Heilshorn and AO 22 Associates, 2 Pages (April 8, 1994). Press Release, "Parkervision, Inc. Announces First Quarter Financial Results," Lippert/Heilshorn and ΑP <u>22</u> Associates, 2 Pages (April 26, 1994). Press Release, "Parkervision, Inc. Announces The Retirement of William H. Fletcher, Chief Financial Officer," AQ 22 Lippert/Heilshorn and Associates, 1 Page (May 11, 1994). Press Release, "Parkervision, Inc. Announces New Cameraman System II™ At Infocomm Trade Show," AR <u>22</u> Lippert/Heilshorn and Associates, 3 Pages (June 9, 1994). **EXAMINER** DATE CONSIDERED

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APPLICATION NO. ATTY. DOCKET NO. 10/086,250 DEC 1 7 2003 1744.0140006 FORM PTO-1449 **APPLICANTS** TATE MADE NO Sorrells et al. MATION DISCLOSURE STATEMENT GROUP FILING DATE 2686 March 4, 2002 **U.S. PATENT DOCUMENTS EXAMINER** CLASS **FILING DATE** SUB-**DOCUMENT** DATE NAME INITIAL CLASS NUMBER Hamao et al. 03/1994 **AA23** 5,293,398 04/1994 Laws AB23 5,303,417 04/1994 Rich AC23 5,307,517 Murphy et al. AD23 5,315,583 05/1994 06/1994 Seong AE23 5,321,852 Scarpa 06/1994 AF23 5,325,204 Najle et al. 5,337,014 08/1994 AG23 Taguchi AH23 5,339,054 08/1994 08/1994 Schiltz et al. AI23 5,339,459 **FOREIGN PATENT DOCUMENTS EXAMINER** CLASS TRANSLATION COUNTRY DOCUMENT NUMBER SUB-DATE INITIAL **CLASS** 06/2000 PCT N/A AJ23 WO 00/31659 A1 No 02/1997 JP AK23 JP 9-36664 A Yes AL No Yes AM No OTHER (Including Author, Title, Date, Pertinent Pages, etc.) Press Release, "Parkervision, Inc. Announces Appointments to its National Sales Force," Lippert/Heilshorn and ΑN <u>23</u> Associates, 2 Pages (June 17, 1994). Press Release, "Parkervision, Inc. Announces Second Quarter and Six Months Financial Results," AO <u>23</u> Lippert/Heilshorn and Associates, 3 Pages (August 9, 1994). Press Release, "Parkervision, Inc. Announces Third Quarter and Nine Months Financial Results," AP <u>23</u> Lippert/Heilshorn and Associates, 3 Pages (October 28, 1994). Press Release, "Parkervision, Inc. Announces First Significant Dealer Sale of Its. Cameraman® System II," AQ <u>23</u> Lippert/Heilshorn and Associates, 2 Pages (November 7, 1994). Press Release, "Parkervision, Inc. Announces Fourth Quarter and Year End Results," Lippert/Heilshorn and AR <u>23</u> VB Associates, 2 Pages (March 1, 1995). DATE CONSIDERED **EXAMINER**

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Page 24 of 58 ATTY. DOCKET NO. APPLICATION NO. 1744.0140006 10/086,250 FORM PTO-1449 APPLICANTS THADEN Sorrells et al. ATION DISCLOSURE STATEMENT FILING DATE GROUP March 4, 2002 2686 U.S. PATENT DOCUMENTS **EXAMINER** INITIAL DOCUMENT DATE NAME CLASS SUB-**FILING DATE** NUMBER CLASS Sutterlin et al. 5M AA24 10/1994 5,355,114 11/1994 Watanabe et al. AB24 5,361,408 AC24 5,369,800 11/1994 Takagi et al. 12/1994 Chaimers AD24 5,375,146 Mizomoto et al. AE24 5,379,040 01/1995 DEC 1 8 2003 01/1995 Thompson et al. AF24 5,379,141 Technology Center 2600 Takatori et al. AG24 02/1995 5,388,063 02/1995 Webster et al. AH24 5,390,364 AI24 03/1995 Scarpa 5,400,084 FOREIGN PATENT DOCUMENTS **EXAMINER** COUNTRY TRANSLATION **DOCUMENT NUMBER** DATE **CLASS** SUB-INITIAL CLASS Yes AJ No Yes ΑK No Yes AL No Yes AM No OTHER (Including Author, Title, Date, Pertinent Pages, etc.) Press Release, "Parkervision, Inc. Announces Joint Product Developments With VTEL," Lippert/Heilshorn and AN <u>24</u> Associates, 2 Pages (March 21, 1995). Press Release, "Parkervision, Inc. Announces First Quarter Financial Results," Lippert/Heilshorn and AO <u>24</u> Associates, 3 Pages (April 28, 1995). Press Release, "Parkervision Wins Top 100 Product Districts' Choice Award," Parkervision Marketing and AP <u>24</u> Manufacturing Headquarters, 1 Page (June 29, 1995). Press Release, "Parkervision National Sales Manager Next President of USDLA," Parkervision Marketing and AQ <u>24</u> Manufacturing Headquarters, 1 Page (July 6, 1995).

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APPLICATION NO. ATTY. DOCKET NO. 10/086,250 1744.0140006 1 7 2003 DEC FORM PTO-1449 APPLICANTS TAN MADENA Sorrells et al. ATION DISCLOSURE STATEMENT GROUP FILING DATE 2686 March 4, 2002 U.S. PATENT DOCUMENTS **EXAMINER** FILING DATE CLASS SUB-DATE NAME DOCUMENT INITIAL CLASS NUMBER **Palmer AA26** 5,434,546 07/1995 Mohindra 08/1995 AB26 5,438,692 Dent et al. 08/1995 AC26 5,444,415 08/1995 Ishikawa et al. AD26 5,444,416 Heck et al. 08/1995 5,444,865 AE26 Kechkaylo 08/1995 AF26 5,446,421 Mattila et al. 08/1995 AG26 5,446,422 09/1995 Ohmori et al. 5,448,602 **AH26** Lawton 09/1995 51/4 AI26 5,451,899 **FOREIGN PATENT DOCUMENTS EXAMINER** CLASS TRANSLATION COUNTRY SUB-DATE INITIAL DOCUMENT NUMBER **CLASS** Yes ΑJ No Yes ΑK No Yes AL No Yes AM No OTHER (Including Author, Title, Date, Pertinent Pages, etc.) Press Release, "Parkervision's Cameraman Personal Locator Camera System Wins Telecon XV Award," ΑN <u> 26</u> Parkervision Marketing and Manufacturing Headquarters, 2 Pages (November 1, 1995). Press Release, "Parkervision, Inc. Announces Purchase Commitment From VTEL Corporation," Parkervision AO <u> 26</u> Marketing and Manufacturing Headquarters, 1 Page (February 26, 1996). Press Release, "ParkerVision, Inc. Announces Fourth Quarter and Year End Results," Parkervision Marketing AP <u> 26</u> and Manufacturing Headquarters, 2 Pages (February 27, 1996). Press Release, "ParkerVision, Inc. Expands its Product Line," Parkervision Marketing and Manufacturing AQ 26 Headquarters, 2 Pages (March 7, 1996). Press Release, "ParkerVision Files Patents for its Research of Wireless Technology," Parkervision Marketing AR <u> 26</u> and Manufacturing Headquarters, 1 Page (March 28, 1996). DATE CONSIDERED **EXAMINER**

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Page 28 of 58 ATTY. DOCKET NO. APPLICATION NO. 1 7 2003 1744.0140006 10/086,250 FORM PTO-1449 APPLICANTS TRADEN Sorrells et al TION DISCLOSURE STATEMENT GROUP FILING DATE 2686 March 4, 2002 **U.S. PATENT DOCUMENTS EXAMINER CLASS FILING DATE** INITIAL **DOCUMENT** DATE NAME SUB-NUMBER CLASS **AA28** 5,479,447 Chow et al. 12/1995 Kennedy et al. AB28 5,483,193 01/1996 01/1996 Weinberg et al. AC28 5,483,549 Heck et al. AD28 5,483,691 01/1996 DEC 1 8 2003 Whikehart et al. AE28 5,490,173 02/1996 02/1996 Young et al. AF28 5,493,581 Technology Center 2600 Reis AG28 5,493,721 02/1996 AH28 02/1996 Kwan et al. 5,495,200 **AI28** 5,495,202 02/1996 Hsu **FOREIGN PATENT DOCUMENTS EXAMINER** COUNTRY CLASS INITIAL DOCUMENT NUMBER DATE SUB-**TRANSLATION CLASS** AJ Yes 6 No Yes ΑK No Yes AL No AΜ Yes No OTHER (Including Author, Title, Date, Pertinent Pages, etc.) Press Release, "Parkervision, Inc. Announces Second Quarter and Six Months Financial Results," Parkervision AN <u>28</u> ΣB Marketing and Manufacturing Headquarters, 3 Pages (August 1, 1996). Press Release, "Parkervision, Inc. Announces Third Quarter and Nine Months Financial Results," Parkervision AΩ <u> 28</u> Marketing and Manufacturing Headquarters, 2 Pages (October 29, 1996). Press Release, "PictureTel and ParkerVision Sign Reseller Agreement," Parkervision Marketing and AP <u>28</u> Manufacturing Headquarters, 2 Pages (October 30, 1996). Press Release, "CLI and ParkerVision Bring Enhanced Ease-of-Use to Videoconferencing," CLI/Parkervision, 2 AQ <u> 28</u> Pages (January 20, 1997). Press Release, "Parkervision, Inc. Announces Fourth Quarter and Year End Results." Parkervision Marketing AR 28

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Page 29 of 58 ATTY. DOCKET NO. APPLICATION NO. 1744.0140006 10/086,250 FORM PTO-1449 APPLICANTS Sorrells et al THADENAP NATION DISCLOSURE STATEMENT FILING DATE GROUP March 4, 2002 2686 U.S. PATENT DOCUMENTS **EXAMINER** DATE NAME CLASS SUB-FILING DATE INITIAL DOCUMENT CLASS NUMBER **AA29** 5,495,500 02/1996 Jovanovich et al. Ohe et al. **AB29** 03/1996 5,499,267 Thompson et al. 03/1996 AC29 5,500,758 05/1996 Fajen et al. AD29 5,517,688 DEC 1 8 2003 05/1996 **Pinckley** AE29 5,519,890 Longo et al. Technology Center 2600 AF29 5.523,719 06/1996 Kroeger et al. AG29 5,523,726 06/1996 06/1996 McEwan AH29 5,523,760 07/1996 Ishigaki AI29 5,539,770 **FOREIGN PATENT DOCUMENTS EXAMINER** TRANSLATION INITIAL DOCUMENT NUMBER DATE COUNTRY CLASS SUB-CLASS Yes AJ Yes ΑK No Yes AL No Yes AM No OTHER (Including Author, Title, Date, Pertinent Pages, etc.) Press Release, "Parkervision, Inc. Announces First Quarter Financial Results," Parkervision Marketing and AN 29 Manufacturing Headquarters, 3 Pages (April 29, 1997). Press Release, "NEC and Parkervision Make Distance Learning Closer," NEC America, 2 Pages (June 18, AO <u> 29</u> Press Release, "Parkervision Supplies JPL with Robotic Cameras, Cameraman Shot Director for Mars Mission," ΑP <u> 29</u> Parkervision Marketing and Manufacturing Headquarters, 2 pages (July 8, 1997). Press Release, "ParkerVision and IBM Join Forces to Create Wireless Computer Peripherals," Parkervision AQ <u> 29</u> Marketing and Manufacturing Headquarters, 2 Pages (July 23, 1997). Press Release, "ParkerVision, Inc. Announces Second Quarter and Six Months Financial Results," Parkervision 5% AR <u>29</u> Marketing and Manufacturing Headquarters, 3 Pages (July 31, 1997). DATE CONSIDERED **EXAMINER**

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Page 30 of 58 APPLICATION NO. ATTY. DOCKET NO. 1744.0140006 10/086,250 FORM PTO-1449 APPLICANTS Sorrells et al TION DISCLOSURE STATEMENT GROUP FILING DATE March 4, 2002 2686 **U.S. PATENT DOCUMENTS EXAMINER** DOCUMENT FILING DATE DATE **CLASS** SUB-INITIAL NAME NUMBER CLASS Kajimoto et al. 5,555,453 09/1996 **AA30** 09/1996 Weinberg **AB30** 5,557,641 09/1996 Williams AC30 5,557,642 11/1996 Smith et al. AD30 5,579,341 DEC 1 8 2003
Technology Center 2600 5,579,347 11/1996 Lindquist et al. AE30 12/1996 Mohindra AF30 5,584,068 01/1997 Labreche et al. AG30 5,592,131 **AH30** 5,602,847 02/1997 Pagano et al. 02/1997 Wilson 84 5,602,868 **AI30 FOREIGN PATENT DOCUMENTS EXAMINER** COUNTRY TRANSLATION **CLASS DOCUMENT NUMBER** DATE SUB-INITIAL **CLASS** Yes ΑJ No Yes ΑK No Yes AL No AM Yes No OTHER (Including Author, Title, Date, Pertinent Pages, etc.) Press Release, "Parkervision, Inc. Announces Private Placement of 990,000 Shares," Parkervision Marketing AN <u>30</u> and Manufacturing Headquarters, 2 Pages (September 8, 1997). Press Release, "Wal-Mart Chooses Parkervision for Broadcast Production," Parkervision Marketing and AO <u>30</u> Manufacturing Headquarters, 2 Pages (October 24, 1997). Press Release, "Parkervision, Inc. Announces Third Quarter Financial Results," Parkervision Marketing and AΡ <u>30</u> Manufacturing Headquarters, 3 Pages (October 30, 1997). Press Release, "ParkerVision Announces Breakthrough in Wireless Radio Frequency Technology," Parkervision AQ 30 Marketing and Manufacturing Headquarters, 3 Pages (December 10, 1997). Press Release, "Parkervision, Inc. Announces the Appointment of Joseph F. Skovron to the Position of Vice President, Licensing - Wireless Technologies," Parkervision Marketing and Manufacturing Headquarters, 2 AR <u>30</u> Pages (January 9, 1998).

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Page 31 of 58 ATTY. DOCKET NO. APPLICATION NO. DEC 1 7 2003 10/086,250 1744.0140006 FORM PTO-1449 TATA MADEN APPLICANTS Sorrells et al ION DISCLOSURE STATEMENT GROUP FILING DATE 2686 March 4, 2002 U.S. PATENT DOCUMENTS **EXAMINER CLASS** NAME SUB-**FILING DATE** INITIAL DOCUMENT DATE **CLASS** NUMBER 02/1997 Kim et al. **AA31** 5,604,732 03/1997 Honda et al. **AB31** 5,608,531 03/1997 Tanaka et al. AC31 5,610,946 Nicollini 04/1997 AD31 RE 35,494 04/1997 Mimura et al. AE31 5,617,451 DEC 1 8 5\(\beta\)03 Sempel et al. 04/1997 AF31 5,619,538 04/1997 Rogers et al. AG31 5,621,455 Technology Center 2600 Bella et al. **AH31** 5,630,227 05/1997 わか 06/1997 Pandula AI31 5,640,415 **FOREIGN PATENT DOCUMENTS EXAMINER** COUNTRY CLASS TRANSLATION DATE INITIAL DOCUMENT NUMBER SUB-CLASS Yes AJ No Yes ΑK No Yes AL No Yes AM No OTHER (Including Author, Title, Date, Pertinent Pages, etc.) Press Release, "Parkervision Announces Existing Agreement with IBM Terminates-- Company Continues with Strategic Focus Announced in December," Parkervision Marketing and Manufacturing Headquarters, 2 Pages AN <u>31</u> SP (January 27, 1998). Press Release, "Laboratory Tests Verify Parkervision Wireless Technology," Parkervision Marketing and AO 31 Manufacturing Headquarters, 2 Pages (March 3, 1998). Press Release, "Parkervision, Inc. Announces Fourth Quarter and Year End Financial Results," Parkervision ΑP <u>31</u> Marketing and Manufacturing Headquarters, 3 Pages (March 5, 1998). Press Release, "Parkervision Awarded Editors' Pick of Show for NAB 98," Parkervision Marketing and AQ <u>31</u> Manufacturing Headquarters, 2 Pages (April 15, 1998). Press Release, "Parkervision Announces First Quarter Financial Results," Parkervision Marketing and AR SA <u>31</u> Manufacturing Headquarters, 3 Pages (May 4, 1998). **EXAMINER** DATE CONSIDERED 12/10/04

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Page 32 of 58 ATTY. DOCKET NO. APPLICATION NO. 10/086,250 1744.0140006 FORM PTO-1449 APPLICANTS Sorrells et al ION DISCLOSURE STATEMENT FILING DATE GROUP March 4, 2002 **U.S. PATENT DOCUMENTS** EXAMINER DOCUMENT DATE NAME CLASS SUB-**FILING DATE** INITIAL NUMBER CLASS Banavong et al. **AA32** 5,640,424 06/1997 06/1997 Abe et al. **AB32** 5,640,428 AC32 Shen et al. 06/1997 5,640,698 AD32 5,648,985 07/1997 Bjerede et al. Rodal AE32 5,650,785 07/1997 08/1997 Tang AF32 5,661,424 Technology Center 2600 09/1997 Walker AG32 5,663,878 AH32 5,663,986 09/1997 Striffler Smith et al. 5,668,836 09/1997 AI32 **FOREIGN PATENT DOCUMENTS EXAMINER** COUNTRY **CLASS** TRANSLATION INITIAL **DOCUMENT NUMBER** DATE SUB-**CLASS** Yes ΑJ No ΑK Yes No AL Yes No Yes AM No OTHER (Including Author, Title, Date, Pertinent Pages, etc.) Press Release, "Parkervision 'DIRECT2DATA' Introduced in Response to Market Demand," Parkervision AN <u>32</u> Marketing and Manufacturing Headquarters, 3 Pages (July 9, 1998). Press Release, "Parkervision Expands Senior Management Team," Parkervision Marketing and Manufacturing AO 32 Headquarters, 2 Pages (July 29, 1998). Press Release, "Parkervision Announces Second Quarter and Six Month Financial Results," Parkervision ΑP <u>32</u> Marketing and Manufacturing Headquarters, 4 Pages (July 30, 1998). Press Release, "Parkervision Announces Third Quarter and Nine Month Financial Results," Parkervision AQ 32 Marketing and Manufacturing Headquarters, 3 Pages (October 30, 1998). Press Release, "Questar Infocomm, Inc. Invests \$5 Million in Parkervision Common Stock," Parkervision AR <u>32</u> Marketing and Manufacturing Headquarters, 3 Pages (December 2, 1998). **EXAMINER DATE CONSIDERED**

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Page 34 of 58 ATTY. DOCKET NO. APPLICATION NO. 1744.0140006 10/086,250 FORM PTO-1449 **APPLICANTS** Sorrells et al. ORMATION DISCLOSURE STATEMENT & TRADEH FILING DATE GROUP March 4, 2002 2686 **U.S. PATENT DOCUMENTS EXAMINER** INITIAL **DOCUMENT** DATE NAME **CLASS** SUB-FILING DATE NUMBER CLASS **AA34** 5,724,002 03/1998 Hulick AB34 5,724,653 03/1998 Baker et al. AC34 03/1998 Chen 5,729,577 03/1998 Talwar et al. AD34 5,729,829 Cox et al. AE34 5,732,333 03/1998 AF34 04/1998 Yu et al. 5,736,895 Technology Center 2600 Rotzoll 04/1998 AG34 5,737,035 AH34 5,742,189 04/1998 Yoshida et al. 43 **AI34** 5,748,683 05/1998 Smith et al. **FOREIGN PATENT DOCUMENTS EXAMINER** INITIAL DOCUMENT NUMBER DATE COUNTRY CLASS **TRANSLATION** SUB-CLASS ΑJ Yes No ΑK Yes No AL Yes No AM Yes No OTHER (Including Author, Title, Date, Pertinent Pages, etc.) Reeves, R.J.D., "The Recording and Collocation of Waveforms (Part 1)," Electronic Engineering, Morgan SA ΑN <u>34</u> Brothers Limited, Vol. 31, No. 373, pp. 130-137 (March 1959). Reeves, R.J.D., "The Recording and Collocation of Waveforms (Part 2)," Electronic Engineering, Morgan AΩ <u>34</u> Brothers Limited, Vol. 31, No. 374, pp. 204-212 (April 1959). Rein, H.M. and Zahn, M., "Subnanosecond-Pulse Generator with Variable Pulsewidth Using Avalanche AP <u>34</u> Transistors," Electronics Letters, IEE, Vol. 11, No. 1, pp. 21-23 (January 9, 1975). Riad, S.M. and Nahman, N.S., "Modeling of the Feed-through Wideband (DC to 12.4 Ghz) Sampling-Head," AQ <u>34</u> IEEE MTT-S International Microwave Symposium Digest, IEEE, pp. 267-269 (June 27-29, 1978). Rizzoli, V. et al., "Computer-Aided Noise Analysis of MESFET and HEMT Mixers," IEEE Transactions on AR <u>34</u> Microwave Theory and Techniques, IEEE, Vol. 37, No. 9, pp. 1401-1410 (September 1989). **EXAMINER** DATE CONSIDERED

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Page 40 of 58 ATTY. DOCKET NO. APPLICATION NO. 1744.0140006 10/086,250 FORM PTO-1449 APPLICANTS Sorrells et al. ION DISCLOSURE STATEMENT & TRADEN FILING DATE GROUP March 4, 2002 2686 U.S. PATENT DOCUMENTS **EXAMINER FILING DATE** INITIAL **DOCUMENT** DATE NAME **CLASS** SUB-NUMBER CLASS 04/1977 Gordy et al. AA40 4,017,798 06/1977 Unkauf AB40 4,032,847 Caples et al. 02/1981 AC40 4,253,067 AD40 4,393,395 07/1983 Hacke et al. Fiori, Jr. AE40 4,816,704 03/1989 Watanabe et al. 06/1989 Technology Center 2600 AF40 4,841,265 Motamedi 4,943,974 07/1990 AG40 **AH40** 5,115,409 05/1992 Stepp 10/1994 Yamamoto AI40 5,353,306 **FOREIGN PATENT DOCUMENTS EXAMINER** TRANSLATION COUNTRY **CLASS** INITIAL DOCUMENT NUMBER DATE SUB-CLASS Yes ΑJ No ΑK Yes No AL Yes No AM Yes No OTHER (Including Author, Title, Date, Pertinent Pages, etc.) Tawfik, A.N. and Vilar, E., "Dynamic Structure of a Transhorizon Signal at X-band Over a Sea Path," Sixth International Conference on Antennas and Propagation (ICAP 89) Part 2: Propagation, IEE, pp. 446-450 (April AN <u>40</u> 4-7, 1989). Tawfik, A.N. and Vilar, E., "Statistics of Duration and Intensity of Path Loss in a Microwave Transhorizon Sea-AO 40 Path," Electronics Letters, IEE, Vol. 26, No. 7, pp. 474-476 (March 29, 1990). Tawfik, A.N. and Vilar, E., "X-Band Transhorizon Measurements of CW Transmissions Over the Sea- Part 1: Path Loss, Duration of Events, and Their Modeling," IEEE Transactions on Antennas and Propagation, IEEE AP <u>40</u> Antennas and Propagation Society, Vol. 41, No. 11, pp. 1491-1500 (November 1993). Temes, G.C. and Tsividis, T., "The Special Section on Switched-Capacitor Circuits," Proceedings of the IEEE, AQ <u>40</u> IEEE, Vol. 71, No. 8, pp. 915-916 (August 1983). Thomas, G.B., Calculus and Analytic Geometry, Third Edition, Addison-Wesley Publishing, pp. 119-133 (1960). AR <u>40</u> **DATE CONSIDERED EXAMINER**

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Page 42 of 58 APPLICATION NO. ATTY. DOCKET NO. 10/086,250 1744.0140006 FORM PTO-1449 **APPLICANTS** Sorrells et al. TION DISCLOSURE STATEMENT RADEN GROUP FILING DATE March 4, 2002 2686 **U.S. PATENT DOCUMENTS EXAMINER** FILING DATE DATE NAME CLASS SUB-DOCUMENT INITIAL CLASS NUMBER 06/1998 Ushiroku et al. AA42 5,770,985 07/1998 Walley **AB42** 5,778,022 Zhou et al. AC42 5,812,546 09/1998 Miya et al. 10/1998 AD42 5,818,869 Abeno et al. 12/1998 AE42 5,844,449 DEC 1 8 2003 02/1999 Cranford, Jr. et al. AF42 5,872,446 06/1999 Cox et al. Technology Center 2600 AG42 5,909,447 Sehier et al. 08/1999 AH42 5,933,467 09/1999 McCune, Jr. et al. **AI42** 5,952,895 **FOREIGN PATENT DOCUMENTS** EXAMINER DATE COUNTRY CLASS SUB-**TRANSLATION** DOCUMENT NUMBER INITIAL CLASS Yes ΑJ No Yes ΑK No Yes AL No Yes AΜ No OTHER (Including Author, Title, Date, Pertinent Pages, etc.) Valdmanis, J.A. et al., "Picosecond and Subpicosend Optoelectronics for Measurements of Future High Speed AN <u>42</u> Electronic Devices," IEDM Technical Digest, IEEE, pp. 597-600 (December 5-7, 1983). van de Kamp, M.M.J.L., "Asymmetric signal level distribution due to tropospheric scintillation." Electronics AO 42 Letters, IEE, Vol. 34, No. 11, pp. 1145-1146 (May 28, 1998). Vasseur, H. and Vanhoenacker, D., "Characterization of tropospheric turbulent layers from radiosonde data," AP 42 Electronics Letters, IEE, Vol. 34, No. 4, pp. 318-319 (February 19, 1998). Verdone, R., "Outage Probability Analysis for Short-Range Communication Systems at 60 Ghz in ATT Urban Environments," *IEEE Transactions on Vehicular Technology*, IEEE Vehicular Technology Society, Vol. 46, No. 4, pp. 1027-1039 (November 1997). AQ <u>42</u> Vierira-Ribeiro, S.A., Single-IF DECT Receiver Architecture using a Quadrature Sub-Sampling Band-Pass M Sigma-Delta Modulator, Thesis for Degree of Master's of Engineering, Carleton University, UMI Dissertation AR 42 Services, pp. 1-180 (April 1995). DATE CONSIDERED **EXAMINER**

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